

3 Diatomaceous Earth Sources for Improving Water Retention of Turf Rootzones

Kalytta-Mewes, Mattern, and Reller, University of Augsburg - Germany

Plant Available Water Pores are Between 0.2 to 10 Microns

AxisDE has 22% to 69% More Pore Volume that Determines Plant Available Water than other D.E.

Deposit site	Integration limits	Pore volume
Nevada, USA	0.2 - 10 microns	0.78 cm ³ /g
Australia	0.2 - 10 microns	0.64 cm ³ /g
Denmark	0.2 - 10 microns	0.45 cm ³ /g

10% AxisDE Adds 60% More Pores to USGA Sand.

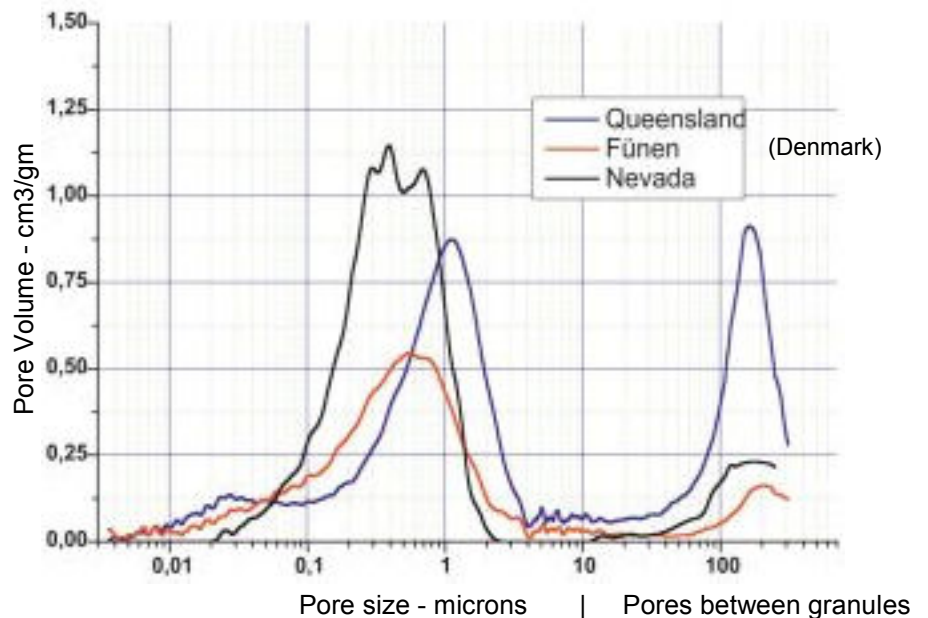
Pore Volume	pF	Diatomaceous Earth (Nevada)	USGA sand	USGA sand mixture
Fine pores	4.2 - 7	40.2%	6.2%	11.2%
Medium pores	2.5 - 4.2	14.2%	4.1%	5.1%

Distribution of fine and medium pores - percent by volume.

“10% (AxisDE) adds 32% more Available Water Capacity to USGA sand.”

“Adding 10% D.E. to the sand mixture would be a worthwhile supplement to existing water management systems.”

Univ. of Augsburg



AxisDE absorbs 26% to 34% More Water than other D.E.

Diatom. Earth	Australia	Denmark	Nevada
Absorp. %/wt.	93.3%	98.8%	125%

Water absorption capacity - percent by weight.